No Need for a Stan Check

Photo by PHAN Michael B. W. Watkins. Composite.

By Lt. Scott McLain

The seas were angry that day–like an old man sending back soup at a deli. Our flight was one of the first night missions of Operation Iraqi Freedom (OIF). We went to the gaggle-strike brief, knowing the weather was less than desirable. After the brief, the admiral stood up and told us he knew the weather was bad and would affect our mission, but troops on the ground needed our support, and we were going, no matter what. The mission had to be done. I was a junior E-2C carrier-aircraft plane commander (CAPC), with another junior CAPC in the right seat. I was a little nervous.

After being shot off the pointy end, we entered the clouds at 2,000 feet and remained in the goo through the climb to our stationing altitude of FL270. Because our station was 450 miles over the beach, the No. 1 priority in the cockpit was fuel conservation. During the climb-out, the copilot's airspeed dropped to zero, and his altimeter dropped 2,000 feet. My instruments held steady, so we concluded his pitot-static system was icing over.

We climbed through and leveled off in the most severe thunderstorm I ever had encountered. Saint Elmo's fire was all over the windscreen, and, every couple of minutes, a finger of angry electricity would crawl from the bottom of the windscreen to the top. The admiral's statement rang deep in our minds: We had to keep going. We were the only command-and-control show in town, and, without us, no aircraft would be permitted to fly in-country.

Our track dragged us east to Iraq. The return leg would retrace our steps but into a steep headwind. As the combat-information center (CIC) crew worked their strike groups in-country, our main objective was to correctly

manage the fuel. We had to make it back to the ship for the recovery with at least barricade plus two on the ball. This requirement meant I would have three looks at the boat before bad stuff would happen.

While on-station profile, heading east, my AOA froze, so I no longer could fly a solid 20 units to maintain a max-conserve profile. I had to rely on my airspeed and fuel flow to maintain profile on-station and keep supporting the ingressing strike packages.

As if my plate wasn't full enough, the pitch-feel light came on, caused by the copilot airspeed failure. We took manual control of the system and matched up the airspeeds at 150 knots. We climbed to FL290 for clearer air but had no luck. We were IMC, with only the basics, doing everything we could to make sure strikers were getting in-country, dropping bombs on target, and helping the troops on the ground.

We continued to press east down the track, the whole time trying to judge when we needed to turn around and return to the ship. The way things were going with my instruments, my calculations seemed close but not close enough to make me feel comfortable.

We arrived at the determined turn point and headed west toward the ship. In hindsight, it probably was a little early, but we decided to err on the safe side. A tiny ray of goodness arrived, when we finally broke out on top of the clouds, but it didn't last long. As we watched lightning arc from cloud to cloud below us, our primary attitude reference, the carrier-aircraft-inertial-navigation system (CAINS), died. I switched to our backup, the heading-and-attitude-reference system (HARS) and pressed homeward.

About 20 minutes later, I saw the gearbox-oil pressure on my starboard engine begin to fluctuate. This fluctuation usually means a transmitter problem. I looked for secondary indications of an oil-system failure and told the mission commander (in the back), about our situation. Our MC was at a critical stage in the mission; he couldn't turn off the radar and help me with a visual inspection of the starboard nacelle. The oil pressure continued to drop off steadily and remained bottomed out for longer and longer periods of time—not what I've seen before with transmitter problems. As I scanned my oil temperature, it increased one unit, then two. We needed to shift the focus from the assigned mission to our quickly degrading aircraft. The NFOs still were working their magic in the back, but I knew we were running out of time.

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Fortunately, the return trip to the ship was above the bad weather. Unfortunately, there were no close diverts. The nearest divert field on our flight path was Incirlick, Turkey, about 100 miles away. For what seemed like an eternity but probably was closer to five minutes, we trudged back to the ship, as the NFOs completed their mission. Finally, the mission commander examined the starboard nacelle and said oil was pouring out of it. Taking this plane back to the ship in the goo, at night, with a pending engine shutdown, no longer was an option. I instructed my copilot to contact Incirlick approach.

A flickering oil-low light now accompanied the starboard oil-pressure fluctuations. Ninety miles outside Incirlick, approach told us they couldn't pick us up until 50 DME. The engine still was running, and oil pressure was within limits. I had no idea what the ceilings were, and I knew we couldn't maintain our current altitude with one engine. I decided to leave the engine running and maintain our current altitude, rather than begin a single-engine penetra-

tion into the goo so far out from Incirlick.

At 50 miles, approach picked us up with radar vectors for descent. The cockpit indications assured me that we'd secure the engine before landing, so my copilot contacted approach to make sure Incirlick had rigged their arresting gear for a trap. We were told the active-duty runway, runway 5, had rigged only the long-field gear, and it would take 30 minutes to rig the short-field gear. Runway 23, however, would be available immediately with the short-field gear. With the light winds reported at the field, and the deteriorating condition of the aircraft, I decided to take the trap on the off-duty runway.

On the descent, the gearbox-oil pressure no longer registered, the oil temp was high but within limits, the power-section pressure fluctuated, and I still had a flickering oil-low light. Just to be sure, I asked the mission commander how much oil was leaking out the nacelle.

He replied, "I don't know, all of it?"

I got the point; it was time to shut down the engine.

As if these problems weren't enough, I realized as we descended below the clouds to 4,000 feet that I couldn't see out my windscreen. It was frozen over. The pilot's windshield anti-ice circuit breaker had popped. The breaker was reset, and the windshield anti-ice returned. As I wiped the melting ice from my warming windscreen, we ran through the procedures to secure the starboard engine. When the engine feathered, we lost the cockpit's multi-function-control-display unit (MFCDU), our main navigation-situational display, and our main UHF radio. We tuned one of the back radios and continued our visual approach to the field. As we neared the field, the controller called, "Field at 12 o'clock, call it in sight."

We were below the weather, with good visibility, but the field wasn't there. We executed a single-engine missed approach but didn't go back up into the clouds. As we were being vectored into the box pattern for another look, I requested the PAR. Of course, the PAR wasn't available. As I set up for the TACAN approach, the light in my head finally came on, and I asked approach to confirm the lights were on for runway 23. On cue, the runway lights came on, and we flew a single-engine TACAN approach to a successful arrestment.

That ordeal should have been enough for anyone, but we were in the middle of supporting the war on Iraq, so we had to get the plane back to the ship, ASAP. The next morning, some of our finest maintainers arrived by helo and fixed a loose hose on the oil-scavenge pump.

After a few hours of sleep, we departed that evening for the ship. As I raised the gear on the climb-out, I got an unsafe-nose-gear-up indication. We just couldn't win for trying. This plane had had the same problem the morning before, and all three gear had come down and locked when lowered. I needed to get this bird back in the fight, so I requested the tower to visually inspect the gear. They said the gear was up, and the doors looked flush, so I pressed on to the ship.

The last 48 hours had me thinking the worst, so I prepared for an unsafe-down indication for my night approach and worked the gear-down bingo numbers, just in case. Also, according to the emergency procedure, I would be speed-limited en route the ship and on the approach.

We told marshal we were airspeed-limited and would transition early to the landing configuration. At 10 miles, we lowered the gear, and, fortunately, it gave me all three down and locked. Having completed the checklists to handle a failure to just about every system in the plane, I finally trapped, just as the left generator tripped offline.

After that flight, I told the NATOPS officer I had encountered about everything that could be thrown at me in the simulator, and it far exceeded anything that could be thrown at me in the plane. I told him I wouldn't need a STAN check this year.

Lt. McLain flies with VAW-124.

This sortie is a superb example of how ORM, CRM, and outstanding airmanship come together to complete the mission and preserve a vital combat asset. I recommend CRM facilitators retain this article and use it regularly as an example of everything done right. —Cdr. Darryl Barrickman, E-2 analyst, Naval Safety Center